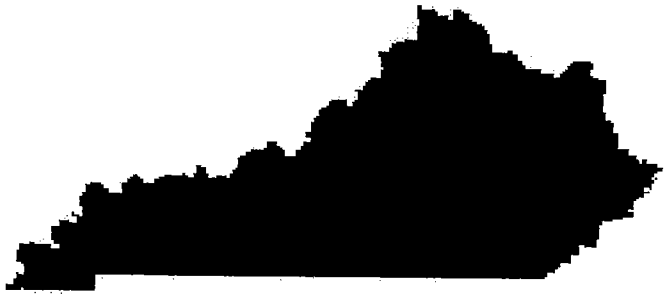
KPDES



KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT

PERMIT NO.: KY0004049
AI NO.: 3059

AUTHORIZATION TO DISCHARGE UNDER THE KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

Pursuant to Authority in KRS 224,

United States Department of Energy (DOE)
P.O. Box 1410
Paducah, Kentucky 42001-1410

Paducah Remediation Services, LLC
P.O. Box 340
Kevil, Kentucky 42053

Uranium Disposition Services, LLC
1020 Monarch Street, Suite 100
Lexington, Kentucky 40513

is authorized to discharge from a facility located at

Paducah Gaseous Diffusion Plant
Depleted Uranium Hexafluoride Conversion Facility
5600 Hobbs Road
West Paducah, Kentucky 42086

to receiving waters named

Outfalls 001, 015, and 017 discharges to Bayou Creek at mile points 5.6, 6.2, and 7.1, respectively.

Outfall 019 discharges to an Unnamed Tributary of Little Bayou Creek at mile point 0.25

in accordance with effluent limitations, monitoring requirements, and other conditions set forth in PARTS I, II, III, IV, and V hereof. The permit consists of this cover sheet, and PART I 13 pages, PART II 6 page, PART III 2 page, PART IV 6 pages, and PART V 3 pages.

This permit shall become effective on NOV 1 2006

This permit and the authorization to discharge shall expire at midnight, OCT 3 1 2011

SEP 2 9 2006
Date Signed

David W. Morgan, Director
Division of Water

Lloyd R. Cress
Commissioner

A1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 001 - The treated wastestreams of the C-752-A Waste Storage and Treatment Facility (100,000 gpy), C-752-C Decontamination Pad (100,000 gpy), C-753 Waste Treatment and Storage, C-616 Wastewater Treatment Facility (0.8 MGD), C-612 Northwest Plume Groundwater System (0.3 MGD), C-614 Northeast Plume Containment System, and C-613 Northwest Corner Storm Water Collection Basin (1500 gpm) and contributing sources of these units.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		DISCHARGE LIMITATIONS Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	N/A	N/A	1/day	Instantaneous
Total Suspended Solids (mg/l)	N/A	N/A	30	60	1/Week	Grab
Oil & Grease (mg/l)	N/A	N/A	10	15	1/Week	Grab
Total Residual Chlorine (mg/l)	N/A	N/A	0.011	0.019	1/Week	Grab
Temperature (°F)	N/A	N/A	Report	89	1/Week	Grab
PCBs (mg/l)	N/A	N/A	0.000000065	Report	1/Week	Grab
Trichloroethylene (mg/l)	N/A	N/A	0.0308	Report	1/Week	Grab
Total Phosphorus (mg/l)	N/A	N/A	1.0	1.0	1/Week	Grab
Total Alpha (pCi/l)	N/A	N/A	Report	15	1/Week	Grab
Total Beta (pCi/l)	N/A	N/A	Report	50	1/Week	Grab
Uranium (µg/l)	N/A	N/A	Report	30	1/Week	Grab
Chronic Toxicity (TU_c)	N/A	N/A	N/A	1.00	1/Quarter	3 24-Hr Composites
Technetium-99 (pCi/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Hardness (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Quarter	Grab
1,1,2,2-Tetrachloroethane (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
1,1-Dichloroethylene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
1,2-Diphenylhydrazine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 1/Week by grab sample.

The abbreviation N/A means Not Applicable.
The abbreviation PCBs means Polychlorinated Biphenyls.

A1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 001 - The treated wastestreams of the C-752-A Waste Storage and Treatment Facility (100,000 gpy), C-752-C Decontamination Pad (100,000 gpy), C-753 Waste Treatment and Storage, C-616 Wastewater Treatment Facility (0.8 MGD), C-612 Northwest Plume Groundwater System (0.3 MGD), C-614 Northeast Plume Containment System, and C-613 Northwest Corner Storm Water Collection Basin (1500 gpm) and contributing sources of these units.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
2,4,6-Trichlorophenol (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
2,4-Dinitrotoluene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
3,3-Dichlorobenzidine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
4,4'-DDD (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
4,4'-DDE (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
4,4'-DDT (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Acrylonitrile (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Aldrin (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
alpha-BHC (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
alpha-Endosulfan (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzidine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzo(a)anthracene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzo(a)pyrene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzo(k)fluoranthene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Beta-BHC (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Beta-Endosulfan (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Bis(2-ethylhexyl)phthalate (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Carbon Tetrachloride (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Chlordane (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Chrysene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Dibenzo(a,h)anthracene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab

The abbreviation N/A means Not Applicable.

A1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 001 - The treated wastestreams of the C-752-A Waste Storage and Treatment Facility (100,000 gpy), C-752-C Decontamination Pad (100,000 gpy), C-753 Waste Treatment and Storage, C-616 Wastewater Treatment Facility (0.8 MGD), C-612 Northwest Plume Groundwater System (0.3 MGD), C-614 Northeast Plume Containment System, and C-613 Northwest Corner Storm Water Collection Basin (1500 gpm) and contributing sources of these units.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Dieldrin (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Endrin (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Free Cyanide (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
gamma-BHC (Lindane) (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Heptachlor (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Heptachlor epoxide (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Hexachlorobenzene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Hexachloroethane (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Ideno(1,2,3-cd)pyrene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
N-Nitrosodimethylamine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
N-Nitrosodi-n-Propylamine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
N-Nitrosodiphenylamine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Pentachlorophenol (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Tetrachloroethylene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Cadmium (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Copper (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Lead (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Mercury (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Selenium (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Silver (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Thallium (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.
The abbreviation N/A means Not Applicable.

A2. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 015 - Untreated storm water runoff from the C-749 Uranium Scrap Burial Yard, C-404 Low-Level Radioactive Waste Burial Ground, and the C-747 Burial Area.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		DISCHARGE LIMITATIONS Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	N/A	N/A	1/Month	Instantaneous
Total Suspended Solids (mg/l)	N/A	N/A	30	60	1/Month	Grab
Oil & Grease (mg/l)	N/A	N/A	10	15	1/Month	Grab
PCBs (mg/l)	N/A	N/A	0.000000065	Report	1/Month	Grab
Total Alpha (?Ci/l)	N/A	N/A	Report	15	1/Month	Grab
Total Beta (?Ci/l)	N/A	N/A	Report	50	1/Month	Grab
Uranium (µg/l)	N/A	N/A	Report	30	1/Month	Grab
Acute Toxicity (TU_A)	N/A	N/A	N/A	1.00	1/Quarter	2 Grabs
Technetium-99 (?Ci/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Hardness (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Iron (mg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
1,1,2,2-Tetrachloroethane (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
1,1-Dichloroethylene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
1,2-Diphenylhydrazine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
2,4,6-Trichlorophenol (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 1/Month by grab sample.

The abbreviation N/A means Not Applicable.
The abbreviation PCBs means Polychlorinated Biphenyls.

A2. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 015 - Untreated storm water runoff from the C-749 Uranium Scrap Burial Yard, C-404 Low-Level Radioactive Waste Burial Ground, and the C-747 Burial Area.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
2,4-Dinitrotoluene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
3,3-Dichlorobenzidine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
4,4'-DDD (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
4,4'-DDE (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
4,4'-DDT (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Acrylonitrile (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Aldrin (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
alpha-BHC (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
alpha-Endosulfan (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzidine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzo(a)anthracene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzo(a)pyrene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzo(k)fluoranthene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Beta-BHC (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Beta-Endosulfan (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Bis(2-ethylhexyl)phthalate (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Carbon Tetrachloride (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Chlordane (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Chrysene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Dibenzo(a,h)anthracene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Dieldrin (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab

The abbreviation N/A means Not Applicable.

A2. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 015 - Untreated storm water runoff from the C-749 Uranium Scrap Burial Yard, C-404 Low-Level Radioactive Waste Burial Ground, and the C-747 Burial Area.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Endrin (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Free Cyanide (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
gamma-BHC (Lindane) (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Heptachlor (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Heptachlor epoxide (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Hexachlorobenzene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Hexachloroethane (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Ideno(1,2,3-cd)pyrene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
N-Nitrosodimethylamine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
N-Nitrosodi-n-Propylamine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
N-Nitrosodiphenylamine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Pentachlorophenol (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Tetrachloroethylene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Cadmium (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Copper (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Lead (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Mercury (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Selenium (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Silver (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Thallium (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

The abbreviation N/A means Not Applicable.

A3. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 017 - Untreated storm water runoff, distilled water treatment reject stream, and cooling tower blowdown from the depleted uranium hexafluoride cylinder yard and conversion facility.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day) Monthly Avg.	(lbs/day) Daily Max.	Other Units (Specify) Monthly Avg.	Other Units (Specify) Daily Max.	MONITORING REQUIREMENTS Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	N/A	N/A	1/Month	Instantaneous
Temperature[1] (°F)	N/A	N/A	Report	89	1/Month	Grab
Total Suspended Solids (mg/l)	N/A	N/A	30	60	1/Month	Grab
Oil & Grease (mg/l)	N/A	N/A	10	15	1/Month	Grab
PCBs (mg/l)	N/A	N/A	0.000000065	Report	1/Month	Grab
Total Recoverable Zinc (µg/l)	N/A	N/A	0.120	0.120	1/Month	Grab
Total Alpha (?Ci/l)	N/A	N/A	Report	15	1/Month	Grab
Total Beta (?Ci/l)	N/A	N/A	Report	50	1/Month	Grab
Uranium (µg/l)	N/A	N/A	Report	30	1/Month	Grab
Acute Toxicity (TU_C)	N/A	N/A	N/A	1.00	1/Quarter	2 Grabs
Chronic Toxicity[1] (TU_A)	N/A	N/A	N/A	1.00	1/Month	3 24 Hr Composites
Technetium-99 (?Ci/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Hardness (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Quarter	Grab
1,1,2,2-Tetrachloroethane (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
1,1-Dichloroethylene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
1,2-Diphenylhydrazine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
2,4,6-Trichlorophenol (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 1/Month by grab sample.

The abbreviation N/A means Not Applicable.
The abbreviation PCBs means Polychlorinated Biphenyls.

[1]The limits for Temperature and Chronic Toxicity for Outfall 017 shall become effective upon completion and commencement of operation of the depleted uranium conversion facility.

A3. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 017 - Untreated storm water runoff, distilled water treatment reject stream, and cooling tower blowdown from the depleted uranium hexafluoride cylinder yard and conversion facility.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
2,4-Dinitrotoluene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
3,3-Dichlorobenzidine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
4,4'-DDD (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
4,4'-DDE (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
4,4'-DDT (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Acrylonitrile (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Aldrin (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
alpha-BHC (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
alpha-Endosulfan (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzidine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzo(a)anthracene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzo(a)pyrene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzo(k)fluoranthene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Beta-BHC (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Beta-Endosulfan (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Bis(2-ethylhexyl)phthalate (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Carbon Tetrachloride (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Chlordane (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Chrysene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Dibenzo(a,h)anthracene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Dieldrin (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab

The abbreviation N/A means Not Applicable.

A3. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 017 - Untreated storm water runoff, distilled water treatment reject stream, and cooling tower blowdown from the depleted uranium hexafluoride cylinder yard and conversion facility.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Endrin (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Free Cyanide (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
gamma-BHC (Lindane) (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Heptachlor (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Heptachlor epoxide (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Hexachlorobenzene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Hexachloroethane (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Ideno(1,2,3-cd)pyrene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
N-Nitrosodimethylamine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
N-Nitrosodi-n-Propylamine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
N-Nitrosodiphenylamine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Pentachlorophenol (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Tetrachloroethylene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Cadmium (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Copper (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Lead (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Mercury (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Selenium (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Silver (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Thallium (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

The abbreviation N/A means Not Applicable.

A4. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 019 - Storm water runoff from the C-746-U landfill, and leachate from the C-746-U contained landfill, the C-746-S closed residential landfill, and the C-404 closed hazardous waste landfill.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day) Monthly Avg.	(lbs/day) Daily Max.	Other Units (Specify) Monthly Avg.	Other Units (Specify) Daily Max.	MONITORING REQUIREMENTS Measurement Frequency	Sample Type
Flow (MGD)	Report	Report	N/A	N/A	1/Month	Instantaneous
Total Suspended Solids (mg/l)	N/A	N/A	30	60	1/Month	Grab
Oil & Grease (mg/l)	N/A	N/A	10	15	1/Month	Grab
PCBs (lbs/day)(mg/l)	N/A	0.0	0.000000065	Report	1/Month	Grab
BOD_5 (mg/l)	N/A	N/A	37	140	1/Month	Grab
Ammonia (as mg/l N)	N/A	N/A	3.36	10	1/Month	Grab
a-Terpineol (mg/l)	N/A	N/A	0.016	0.033	1/Month	Grab
Benzoic Acid (mg/l)	N/A	N/A	0.071	0.12	1/Month	Grab
p-Cresol (mg/l)	N/A	N/A	0.014	0.025	1/Month	Grab
Phenol (mg/l)	N/A	N/A	0.015	0.026	1/Month	Grab
Total Recoverable Zinc (µg/l)	N/A	N/A	0.120	0.120	1/Month	Grab
Total Alpha (?Ci/l)	N/A	N/A	Report	15	1/Month	Grab
Total Beta (?Ci/l)	N/A	N/A	Report	50	1/Month	Grab
Uranium (µg/l)	N/A	N/A	Report	30	1/Month	Grab
Acute Toxicity (TU_A)	N/A	N/A	N/A	1.00	1/Quarter	2 Grabs
Technetium-99 (?Ci/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Hardness (as mg/l $CaCO_3$)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Iron (mg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
1,1,2,2-Tetrachloroethane (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
1,1-Dichloroethylene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
1,2-Diphenylhydrazine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
2,4,6-Trichlorophenol (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab

The pH of the effluent shall not be less than 6.0 standard units or greater than 9.0 standard units and shall be monitored 1/Week by grab sample.

The abbreviation N/A means Not Applicable.
The abbreviation PCBs means Polychlorinated Biphenyls.
The abbreviation BOD_5 means Biochemical Oxygen Demand, 5-day.

A4. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
2,4-Dinitrotoluene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
3,3-Dichlorobenzidine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
4,4'-DDD (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
4,4'-DDE (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
4,4'-DDT (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Acrylonitrile (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Aldrin (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
alpha-BHC (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
alpha-Endosulfan (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzidine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzo(a)anthracene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzo(a)pyrene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Benzo(k)fluoranthene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Beta-BHC (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Beta-Endosulfan (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Bis(2-ethylhexyl)phthalate (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Carbon Tetrachloride (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Chlordane (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Chrysene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Dibenzo(a,h)anthracene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Dieldrin (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

The abbreviation N/A means Not Applicable.

A4. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: Outfall 019 - Storm water runoff from the C-746-U landfill, and leachate from the C-746-U contained landfill, the C-746-S closed residential landfill, and the C-404 closed hazardous waste landfill.

Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS (lbs/day)		Other Units (Specify)		MONITORING REQUIREMENTS	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Measurement Frequency	Sample Type
Endrin (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Free Cyanide (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
gamma-BHC (Lindane) (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Heptachlor (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Heptachlor epoxide (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Hexachlorobenzene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Hexachloroethane (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Ideno(1,2,3-cd)pyrene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
N-Nitrosodimethylamine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
N-Nitrosodi-n-Propylamine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
N-Nitrosodiphenylamine (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Pentachlorophenol (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Tetrachloroethylene (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Cadmium (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Copper (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Lead (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Mercury (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Selenium (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Silver (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab
Total Recoverable Thallium (µg/l)	N/A	N/A	Report	Report	1/Quarter	Grab

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

The abbreviation N/A means Not Applicable.

B. Schedule of Compliance

Permittee shall comply with the effluent limitations by the effective date of the permit with the following exceptions.

The effluent limitations for Total Alpha, Total Beta, and Uranium shall become effective three years after the effective date of this permit.

C. Responsible Parties

The United States Department of Energy (DOE), Paducah Remediation Services, LLC (PRS), and Uranium Disposition Services, LLC (UDS) are co-permittees. The DOE and PRS are jointly responsible for all outfalls addressed by this permit. UDS responsibility is limited to Outfall 017 only.

STANDARD CONDITIONS FOR KPDES PERMIT

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

It is the responsibility of the permittee to demonstrate compliance with permit parameter limitations by utilization of sufficiently sensitive analytical methods.

The following KPDES permit conditions apply to all discharges authorized by this permit pursuant to 401 KAR 5:065, Section 1.

(1) Duty to comply.

(a) General requirement.
The permittee shall comply with all conditions of this permit. Any permit noncompliance shall constitute a violation of KRS Chapter 224, among which shall be the following remedies: enforcement action, permit revocation, revocation and reissuance, or modification; or denial of a permit renewal application.

(b) Specific duties.
1. The permittee shall comply with effluent standards or prohibitions established under 40 CFR Part 129 as of July 1, 2001, as adopted without change, within the time provided in the federal regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
2. Any person who violates a permit condition as set forth in the KPDES administrative regulations shall be subject to penalties under KRS 224.99-010(1) and (4).

(2) Duty to reapply.
If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee shall apply for and obtain a new permit as required in 401 KAR 5:060, Section 1.

(3) Need to halt or reduce activity not a defense.
It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(4) Duty to mitigate.
The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

(5) Proper operation and maintenance.
The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control and related appurtenances which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also shall include adequate laboratory controls, and appropriate quality assurance procedures. This provision shall require the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only if the operation is necessary to achieve compliance with the conditions of the permit.

(6) Permit actions.
The permit may be modified, revoked and reissued, or revoked for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or a notification of planned changes or anticipated noncompliance, shall not stay any permit condition.

(7) Property rights.
This permit shall not convey any property rights of any kind, or any exclusive privilege.

(8) Duty to provide information.
The permittee shall furnish to the cabinet, within a reasonable time, any information which the cabinet may request to determine whether cause exists for modifying, revoking and reissuing, or revoking this permit, or to determine compliance with this permit. The permittee shall also furnish to the cabinet, upon request, copies of records required to be kept by this permit.

(9) Inspection and entry.
The permittee shall allow the cabinet, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records pertinent to the KPDES program are or may be kept;
(b) Have access to and copy, at reasonable times, any records that are required to be be kept under the conditions of this permit;
(c) Inspect at reasonable times any facilities, equipment, including monitoring and control equipment, practices, or operations regulated or required under this permit; and
(d) Sample or monitor at reasonable times, for the purposes of assuring KPDES program compliance or as otherwise authorized by KRS Chapter 224, any substances or parameters at any location.

(10) Monitoring and records.

(a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
(b) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report, or application. This period may be extended by request of the cabinet at any time.
(c) Records of monitoring information shall include:
1. The date, exact place, and time of sampling or measurements;
2. The individuals who performed the sampling or measurements;
3. The dates analyses were performed;
4. The individuals who performed the analyses;
5. The analytical techniques or methods used; and
6. The results of the analyses.

(d) Monitoring shall be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit.
(e) Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be subject to penalties under KRS 224.99-010(4).

(11) Signatory requirement.
All applications, reports, or information submitted to the cabinet shall be signed and certified as indicated in 401 KAR 5:060, Section 9. Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be subject to penalties under KRS 224.99-010(4).

(12) Reporting requirements.

(a) Planned changes.
The permittee shall give notice to the cabinet as soon as possible of any planned physical alteration or additions to the permitted facility. Notice shall be required only if:
1. The alteration or addition to a permitted facility may meet one (1) of the criteria for determining whether a facility is a new source in 401 KAR 5:080, Section 5; or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification only applies to pollutants which are subject either to effluent limitations in the permit, or to notification requirements under 401 KAR 5:080, Section 5.

(b) Anticipated noncompliance.
The permittee shall give advance notice to the cabinet of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) Transfers.
The permit shall not be transferable to any person except after notice to the cabinet. The cabinet may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate other requirements as may be necessary under KRS Chapter 224.

(d) Monitoring reports.
Monitoring results shall be reported at the intervals specified in the permit. Monitoring results shall be reported as follows:
1. Monitoring results shall be reported on a Discharge Monitoring Report (DMR).
2. If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR Part 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
3. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the cabinet in the permit.

(e) Compliance schedules.
Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than fourteen (14) days following each schedule date.

(f) Twenty-four (24) hour reporting.
The permittee shall follow the provisions of 401 KAR 5:015 and shall orally report any noncompliance which may endanger health or the environment, within twenty-four (24) hours from the time the permittee becomes aware of the circumstances. This report shall be in addition to and not in lieu of any other reporting requirement applicable to the noncompliance. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The cabinet may waive the written report on a case-by-case basis if the oral report has been received within twenty-four (24) hours. The following shall be included as events which shall be reported within twenty-four (24) hours:
1. Any unanticipated bypass which exceeds any effluent limitation in the permit, as indicated in subsection (13) of this section.
2. Any upset which exceeds any effluent limitation in the permit.
3. Violation of a maximum daily discharge limitation for any of the pollutants listed by the cabinet in the permit to be reported within twenty-four (24) hours, as indicated in Section 2(7) of this administrative regulation.

(g) Other noncompliance.
The permittee shall report all instances of noncompliance not reported under paragraphs (d), (e), and (f) of this subsection, when monitoring reports are submitted. The reports shall contain the information listed in paragraph (f) of this subsection.

(h) Other information.
Where the permittee becomes aware that it failed to submit any relevant fact in a permit application, or submitted incorrect information in a permit application or in any report to the cabinet, it shall promptly submit these facts or information.

(13) Occurrence of a bypass.

(a) Bypass not exceeding limitations.
The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. This type of bypass shall not be subject to the provisions of paragraphs (b) and (c) of this subsection.

(b) Notice.

1. Anticipated bypass.
If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten (10) days before the date of the bypass. Compliance with this requirement constitutes compliance with 401 KAR 5:015, Section 1.
2. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in subsection (12)(f) of this section, twenty-four (24) hour notice. Compliance with this requirement constitutes compliance with 401 KAR 5:015, Section 4.

(c) Prohibition of a bypass.
1. Bypassing shall be prohibited, and the cabinet may take enforcement action against a permittee for bypass, unless:
a. The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition shall not be satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
c. The permittee submitted notices as required under paragraph (b) of this subsection.
2. The cabinet may approve an anticipated bypass, after considering its adverse effects, if the cabinet determines that it will meet the three (3) conditions listed in subparagraph 1a, b, and c of this paragraph.

(14) Occurrence of an upset.

(a) Effect of an upset.
An upset constitutes an affirmative defense to an action brought for noncompliance with technology-based permit effluent limitations if the requirements of paragraph (b) of this subsection are met.

(b) Conditions necessary for a demonstration of an upset.
A permittee who wishes to establish the affirmative defense of upset shall demonstrate through properly signed, contemporaneous operating logs, or other relevant evidence that:
1. An upset occurred and that the permittee can identify the causes of the upset;
2. The permitted facility was at the time being properly operated;
3. The permittee submitted notice of the upset as required in subsection (12)(f) of this section; and
4. The permittee complied with any remedial measures required under subsection (4) of this section.

(c) Burden of proof.
In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset shall have the burden of proof.

(15) Additional conditions applicable to specified categories of KPDES permits. The following conditions, in addition to others set forth in this administrative regulation, shall apply to all KPDES permits within the categories specified below:

(a) Existing manufacturing, commercial, mining, and silvicultural dischargers. In addition to the reporting requirements under subsections (12), (13), and (14) of this section, any existing manufacturing, commercial, mining, and silvicultural discharger shall notify the cabinet as soon as it knows or has reason to know:
1. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
a. 100 micrograms per liter (100 µg/l);
b. 200 micrograms per liter (200 µg/l) for acrolein and acrylonitrile; 500 micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one (1) milligram per liter (1 mg/l) for antimony;
c. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 401 KAR 5:060, Section 2(7);
d. The level established by the cabinet in accordance with Section 2(6) of this administrative regulation.
2. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
a. 500 micrograms per liter (500 µg/l);
b. One (1) milligram per liter (1 mg/l) for antimony;
c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 401 KAR 5:060, Section 2(7); or
d. The level established by the cabinet in accordance with Section 2(6) of this administrative regulation.

(b) POTWs.
1. POTWs shall provide adequate notice to the cabinet of the following:
a. Any new introduction of pollutants into that POTW from an indirect discharger which would be subject to the KPDES administrative regulations if it were directly discharging those pollutants; or
b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
2. For purposes of this paragraph, adequate notice shall include information on the quality and quantity of effluent introduced into the POTWs and any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

PART III

OTHER REQUIREMENTS

A. Reporting of Monitoring Results

Monitoring results obtained during each monitoring period must be reported on a preprinted Discharge Monitoring Report (DMR) Form that will be mailed to you. The completed DMR for each monitoring period must be sent to the Division of Water at the address listed below (with a copy to the appropriate Regional Office) postmarked no later than the 28th day of the month following the monitoring period for which monitoring results were obtained.

Division of Water
Paducah Regional Office
130 Eagle Nest Drive
Paducah, Kentucky 42003

Environmental & Public Protection Cabinet
Dept. for Environmental Protection
Division of Water/KPDES Branch
14 Reilly Road, Frankfort Office Park
ATTN: Supervisor Frankfort, Kentucky 40601

B. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under 401 KAR 5:050 through 5:086, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

2. Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of KRS Chapter 224 when applicable.

C. Cooling Water Additives, FIFRA, and Mollusk Control

The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) in cooling water which ultimately may be released to the waters of the Commonwealth is prohibited, except Herbicides, unless specifically identified and authorized by the KPDES permit. In the event the permittee needs to use a biocide or chemical not previously reported for mollusk control or other purpose, the permittee shall submit sufficient information, a minimum of thirty (30) days prior to the commencement of use of said biocides or chemicals, to the Division of Water for review and establishment of appropriate control parameters. Such information requirements shall include:

1. Name and general composition of biocide or chemical,
2. Any and all aquatic organism toxicity data,
3. Quantities to be used,
4. Frequencies of use,
5. Proposed discharge concentrations, and
6. EPA registration number, if applicable.

PART III

OTHER REQUIREMENTS

D. Bayou Creek and Little Bayou Creek Watershed Monitoring Program

During the reissuance of the previous permit this program was imposed as permit condition to gauge the success of the DOE remediation of the Paducah Gaseous Diffusion Plant. Over the interim period the two watersheds have been extensively sampled to the point that further collection of aquatic organisms could result in a deleterious effect on the aquatic community. Therefore biological sampling will not be required as part of these programs, the permittee shall however continue with the physical/chemical assessment of these watersheds. The permittee shall submit a revised monitoring program for the 2007 calendar year by December 1, 2006.

E. Required Detected Limits For Selected Pollutants

The following MDLs are required to demonstrate compliance of the listed pollutant with water quality based limitations.

Pollutant	MDL (µg/l)	Pollutant	MDL(µg/l)
Polychlorinated Biphenyls	0.065	Total Recoverable Zinc	1.0
1,1,2,2-Tetrachloroethane	0.03	1,1-Dichloroethylene	0.05
1,2-Diphenylhydrazine	0.028	2,4,6-Trichlorophenol	0.64
2,4-Dinitrotoluene	0.02	3,3-Dichlorobenzidine	0.13
4,4'-DDD	0.004	4,4'-DDE	0.004
4,4'-DDT	0.004	Acrylonitrile	0.5
Aldrin	0.007	alpha-BHC	0.0053
alpha-Endosulfan	0.006	Benzidine	0.08
Benzo(a)anthracene	0.002	Benzo(a)pyrene	0.029
Benzo(k)fluoranthene	0.002	Beta-BHC	0.0036
Beta-Endosulfan	0.001	Bis(2-ethylhexyl)phthalate	0.46
Carbon Tetrachloride	0.12	Chlordane	0.014
Chrysene	0.063	Dibenzo(a,h)anthracene	0.019
Dieldrin	0.004	Endrin	0.007
Free Cyanide	5.0	gamma-BHC (Lindane)	0.003
Heptachlor	0.005	Heptachlor epoxide	0.001
Hexachlorobenzene	0.002	Hexachloroethane	0.03
Ideno(1,2,3-cd)pyrene	0.011	N-Nitrosodimethylamine	0.15
N-Nitrosodi-n-Propylamine	0.15	N-Nitrosodiphenylamine	0.81
Pentachlorophenol	0.25	Tetrachloroethylene	0.03
Total Recoverable Cadmium	0.01	Total Recoverable Copper	1.0
Total Recoverable Lead	1.0	Total Recoverable Mercury	0.0002
Total Recoverable Selenium	1.0	Total Recoverable Silver	1.0
Total Recoverable Thallium	1.0		

PART IV
CHRONIC CONCERNS
Biomonitoring

In accordance with PART I of this permit, the permittee shall initiate, within 30 days of the effective date of this permit, or continue the series of tests described below to evaluate wastewater toxicity of the discharge from Outfalls 001 and 017[1].

1. Test Requirements

A. The permittee shall perform one (1) short-term fathead minnow (Pimephales promelas) growth test and one (1) short-term daphnid (Ceriodaphnia sp.) life-cycle test. Tests shall be conducted with appropriate replicates of 100% effluent, a control and a minimum of four (4) evenly spaced effluent concentrations. If the permit limit is less than 100% effluent and greater than or equal to 75% effluent, then one (1) concentration should be 100%. If the permit limit is less than 75% effluent, the permit limit concentration shall be bracketed with two (2) concentrations above and two (2) concentrations below. The selection of the effluent concentrations is subject to revision by the Division. Controls shall be tested concurrently with effluent testing using a synthetic water. The analysis will be deemed reasonable and good only if the minimum control requirements are met (i.e.$\geq$80% survival; 60% adults with 3 broods and 15 or more young/surviving female for the Ceriodaphnia test; an average 0.25 mg weight for the minnow growth test). Any test that does not meet the control acceptability criteria shall be repeated as soon as practicable within the monitoring period (i.e. monthly or quarterly). Noncompliance with the toxicity limit will be demonstrated if the IC_{25} (inhibition concentration) for reproduction or growth is less than 100% effluent

B. Tests shall be conducted on both species at the frequency specified in PART I of this permit.

A minimum of three (3) twenty-four hour composite samples will be collected at a frequency of one (1) sample every other day, or at a frequency to be determined by the permitting authority. For example, the first sample would be used for test initiation, day 1, and for test solution renewal on day 2. The second sample would be used for test solution renewal on days 3 and 4. The third sample would be used for test solution renewal on days 5, 6, and 7. The lapsed time from collection of the last aliquot of the composite and its first use for test initiation, or for test solution renewal shall not exceed 36 hours. Composite samples shall be refrigerated during collection and maintained at 6°C until used.

If after at least six (6) tests, it can be determined that Ceriodaphnia or the Fathead minnow is more sensitive, a request for testing of only that organism can be made to the Division. Upon approval, that organism can be chosen as representative and all subsequent tests can be conducted on only that organism.

[1]These requirements for Outfall 017 shall become effective upon completion and commencement of operation of the depleted uranium conversion facility.

2. Reporting Requirements

Results of all tests conducted with any organism shall be reported according to the most recent format provided by the Division of Water (Appendix 10 of 'Methods for Culturing and Conducting Toxicity Tests with *Pimephales promelas* and *Ceriodaphnia dubia* (Fifth Edition)' KDOW, January 2002). Test results shall be submitted to the Division of Water with the next regularly scheduled discharge monitoring report.

3. Chronic Toxicity

If noncompliance with the toxicity limit occurs (IC_{25} for reproduction or growth is less than 100% effluent), the permittee must conduct a second test within 15 days of the first failure. This test will be used in evaluating the persistence of the toxic event and the possible need for a toxicity reduction evaluation (TRE).

If the second test demonstrates noncompliance with the toxicity limit, the permittee will be required to perform accelerated testing as specified in the following paragraphs.

Complete four (4) additional tests within 90 days of failure of the second test to evaluate the frequency and degree of toxicity. The results of the two (2) tests specified above and of the four (4) additional tests will be used for purposes of this evaluation.

If results from two (2) of any six (6) tests show a significant noncompliance with the chronic limit ($\geq$1.2 times the TU_c), or results from four (4) of any six (6) tests show chronic toxicity (as defined in 1.A), a Toxicity Reduction Evaluation (TRE) will be required.

The permittee shall provide written notification, within five (5) days of the completion of accelerated testing to the Division of Water, that toxicity persisted and that a TRE would be initiated or that toxicity did not persist and the normal testing would resume.

Should toxicity not prove persistent during the accelerated testing, but reoccur within 12 months of the initial failure at a level = 1.2 time the TU_c, then a TRE shall be initiated without further accelerated testing.

4. Toxicity Reduction Evaluation (TRE)

Having determined the effluent to be toxic, the permittee shall develop and implement an acceptable plan for the identification and treatability of the toxicant(s) within 90 days of completion of accelerated testing. The plan shall be developed in accordance with EPA guidance provided in the following EPA publications and submitted for DEP review and comment:

Clarifications Regarding Toxicity Reduction and Identification Evaluations in the National Pollutant Discharge Elimination System Program. March 27, 2001.

Toxicity Reduction Evaluation Guidance For Municipal Wastewater Treatment Plants. August, 1999.

Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures. February 1991.

Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures. February 1989.

Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures. February 1989.

Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs). March 1989.

Abstracts of Toxicity Reduction Evaluations. March 1989.

The plan shall include Toxic Identification Evaluation (TIE) procedures, treatability studies, and evaluations of: chemical usage including changes in types, handling and suppliers; operational and process procedures; housekeeping and maintenance activities; and raw materials. The TRE will establish an implementation schedule not to exceed 24 months for completion of these activities. The implementation schedule shall include monthly progress reports and a final report.

Upon the completion of the TRE, the permittee shall submit a final report detailing the findings of the TRE and the actions to be taken to prevent the reoccurrence of toxicity. This final report shall include: the toxicant(s), if any are identified; treatment options; operational changes; and the proposed resolutions including an implementation schedule not to exceed 180 days.

Should the permittee determine the toxicant(s) and/or a workable treatment prior to the conclusion of the TRE, the permittee will notify, within five (5) days, the Division of Water and take appropriate actions to implement the solution within 180 days of determination.

5. Test Methods

All test organisms, procedures and quality assurance criteria used shall be in accordance with Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (Fourth Edition), EPA-821-R-02-013, or the most recent edition of this publications.

PART IV
ACUTE CONCERNS
Biomonitoring
Precipitation Dependant Discharges

In accordance with Part I of this permit, the permittee shall initiate, within 30 days of the effective date of this permit, or continue the series of tests described below to evaluate wastewater toxicity of the discharge from Outfalls 015, 017, and 019.

1. Test Requirements

A. The permittee shall perform a 48-hour static toxicity test with Ceriodaphnia sp. and a 48-hour static toxicity test with fathead minnow (Pimephales promelas). Tests shall be conducted on each of two (2) grab samples taken over the period of discharge (e.g. discrete sample 1 taken at commencement of discharge, sample 2 taken prior to cessation of discharge). Tests shall be conducted with appropriate replicates of 100% effluent, a control and a minimum of four (4) evenly spaced effluent concentrations. The selection of the effluent concentrations is subject to revision by the Division. Testing of the effluent shall be initiated within 36 hours of each sample collection. Controls shall be conducted concurrently with effluent testing using a synthetic water. The analysis will be deemed reasonable and good only if control survival is 90% or greater in test organisms held in synthetic water. Any test that does not meet the control acceptability criteria shall be repeated as soon as practicable within the monitoring period (i.e. monthly or quarterly). Noncompliance with the toxicity limit will be demonstrated if the LC_{50} is less than 100% effluent.

B. Tests shall be conducted on both species at the frequency specified in PART I of this permit.

If after at least six (6) tests, it can be determined that Ceriodaphnia or the fathead minnow is more sensitive, a request for testing only that organism can be made to the Division. Upon approval, that organism can be chosen as representative and all subsequent tests can be conducted on only that organism.

2. Reporting Requirements

Results of all tests conducted with any organism shall be reported according to the most recent format provided by the Division of Water (Appendix 10 of 'Methods for Culturing and Conducting Toxicity Tests with *Pimephales promelas* and *Ceriodaphnia dubia* (Fifth Edition)' KDOW, January 2002). Test results shall be submitted to the Division of Water with the next regularly scheduled discharge monitoring report.

3. Acute Toxicity

Due to the discharge being precipitation dependant, if noncompliance with the toxicity limit occurs (the LC_{50} is less than 100% effluent), the permittee must conduct a second test as soon as possible but no later than 30 days after the first failure. This test will be used in evaluating the persistence of the toxic event and the possible need for a toxics reduction evaluation (TRE). If a second sample cannot be obtained within this timeframe, then routine sampling shall continue.

If the second test demonstrates noncompliance with the toxicity limit, or any one of the next two routine samples, or any of the samples show a significant noncompliance with the acute limit (=1.2 times the TU_a), the permittee will be required to perform a Toxicity Reduction Evaluation (TRE). The permittee shall provide written notification, within five (5) days of such an event to the Division of Water also indicating that a TRE would be initiated.

4. Toxicity Reduction Evaluation (TRE)

Having determined the effluent to be toxic, the permittee shall develop and implement an acceptable plan for the identification and treatability of the toxicant(s) within 90 days of completion of accelerated testing. The plan shall be developed in accordance with EPA guidance provided in the following EPA publications and submitted for DEP review and comment:

Clarifications Regarding Toxicity Reduction and Identification Evaluations in the National Pollutant Discharge Elimination System Program. March 27, 2001.

Toxicity Reduction Evaluation Guidance For Municipal Wastewater Treatment Plants. August, 1999.

Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures. February 1991.

Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures. February 1989.

Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures. February 1989.

Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs). March 1989.

Abstracts of Toxicity Reduction Evaluations. March 1989.

The plan shall include Toxic Identification Evaluation (TIE) procedures, treatability studies, and evaluations of: chemical usage including changes in types, handling and suppliers; operational and process procedures; housekeeping and maintenance activities; and raw materials. The TRE will establish an implementation schedule not to exceed 24 months for completion of these activities. The implementation schedule shall include monthly progress reports and a final report.

Upon the completion of the TRE, the permittee shall submit a final report detailing the findings of the TRE and the actions to be taken to prevent the reoccurrence of toxicity. This final report shall include: the toxicant(s), if any are identified; treatment options; operational changes; and the proposed resolutions, including an implementation schedule not to exceed 180 days.

Should the permittee determine the toxicant(s) and/or a workable treatment prior to the conclusion of the TRE, the permittee will notify, within five (5) days, the Division of Water and take appropriate actions to implement the solution within 180 days of determination.

5. Test Methods

All test organisms, procedures, and quality assurance criteria used shall be in accordance with Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA-821-R-02-012 (5th edition) or the most recently published edition of this publication.

PART V

BEST MANAGEMENT PRACTICES

SECTION A. GENERAL CONDITIONS

1. Applicability

These conditions apply to all permittees who use, manufacture, store, handle, or discharge any pollutant listed as: (1) toxic under Section 307(a)(1) of the Clean Water Act; (2) oil, as defined in Section 311(a)(1) of the Act; (3) any pollutant listed as hazardous under Section 311 of the Act; or (4) is defined as a pollutant pursuant to KRS 224.01-010(35) and who have ancillary manufacturing operations which could result in (1) the release of a hazardous substance, pollutant, or contaminant, or (2) an environmental emergency, as defined in KRS 224.01-400, as amended, or any regulation promulgated pursuant thereto (hereinafter, the "BMP pollutants"). These operations include material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas.

2. BMP Plan

The permittee shall develop and implement a Best Management Practices (BMP) plan consistent with 401 KAR 5:065, Section 2(10) pursuant to KRS 224.70-110, which prevents or minimizes the potential for the release of "BMP pollutants" from ancillary activities through plant site runoff; spillage or leaks, sludge or waste disposal; or drainage from raw material storage. A Best Management Practices (BMP) plan will be prepared by the permittee unless the permittee can demonstrate through the submission of a BMP outline that the elements and intent of the BMP have been fulfilled through the use of existing plans such as the Spill Prevention Control and Countermeasure (SPCC) plans, contingency plans, and other applicable documents.

3. Implementation

If this is the first time for the BMP requirement, then the plan shall be developed and submitted to the Division of Water within 90 days of the effective date of the permit. Implementation shall be within 180 days of that submission. For permit renewals the plan in effect at the time of permit reissuance shall remain in effect. Modifications to the plan as a result of ineffectiveness or plan changes to the facility shall be submitted to the Division of Water and implemented as soon as possible.

4. General Requirements

The BMP plan shall:

a. Be documented in narrative form, and shall include any necessary plot plans, drawings, or maps.

b. Establish specific objectives for the control of toxic and hazardous pollutants.

(1) Each facility component or system shall be examined for its potential for causing a release of "BMP pollutants" due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

(2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances which could result in a release of "BMP pollutants," the plan should include a prediction of the direction, rate of flow, and total quantity of the pollutants which could be released from the facility as result of each condition or circumstance.

c. Establish specific Best Management Practices to meet the objectives identified under paragraph b of this section, addressing each component or system capable of causing a release of "BMP pollutants."

d. Include any special conditions established in part b of this section.

e. Be reviewed by plant engineering staff and the plant manager.

5. Specific Requirements

The plan shall be consistent with the general guidance contained in the publication entitled "NPDES Best Management Practices Guidance Document," and shall include the following baseline BMPs as a minimum.

a. BMP Committee
b. Reporting of BMP Incidents
c. Risk Identification and Assessment
d. Employee Training
e. Inspections and Records
f. Preventive Maintenance
g. Good Housekeeping
h. Materials Compatibility
i. Security
j. Materials Inventory

6. SPCC Plans

The BMP plan may reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans under Section 311 of the Act and 40 CFR Part 151, and may incorporate any part of such plans into the BMP plan by reference.

7. Hazardous Waste Management

The permittee shall assure the proper management of solid and hazardous waste in accordance with the regulations promulgated under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1978 (RCRA) (40 U.S.C. 6901 et seq.) Management practices required under RCRA regulations shall be referenced in the BMP plan.

8. Documentation

The permittee shall maintain a description of the BMP plan at the facility and shall make the plan available upon request to NREPC personnel. Initial copies and modifications thereof shall be sent to the following addresses when required by Section 3:

Division of Water
Louisville Regional Office
9116 Leesgate Road
Louisville, Kentucky 40222-5084
ATTN: Supervisor

Kentucky Natural Resources and
Environmental Protection Cabinet
Dept. for Environmental Protection
Division of Water/KPDES Branch
14 Reilly Road, Frankfort Office Park
Frankfort, Kentucky 40601

9. BMP Plan Modification

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in the release of "BMP pollutants."

10. Modification for Ineffectiveness

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of "BMP pollutants," then the specific objectives and requirements under paragraphs b and c of Section 4, the permit, and/or the BMP plan shall be subject to modification to incorporate revised BMP requirements. If at any time following the issuance of this permit the BMP plan is found to be inadequate pursuant to a state or federal site inspection or plan review, the plan shall be modified to incorporate such changes necessary to resolve the concerns.

SECTION B. SPECIFIC CONDITIONS

Periodically Discharged Wastewaters Not Specifically Covered By Effluent Conditions

The permittee shall include in this BMP plan procedures and controls necessary for the handling of periodically discharged wastewaters such as intake screen backwash, meter calibration, fire protection, hydrostatic testing water, water associated with demolition projects, etc.

ERNIE FLETCHER
GOVERNOR

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
14 REILLY ROAD
FRANKFORT, KENTUCKY 40601-1190
www.kentucky.gov

LAJUANA S. WILCHER
SECRETARY

SEP 29 2006

Mr. William E. Murphie
United States Department of Energy
P.O. Box 1410
Paducah, Kentucky 42001-1410

Re: Paducah Gaseous Diffusion Plant
KPDES No.: KY0004049
McCracken County, Kentucky

Dear Mr. Murphie:

Enclosed is the Kentucky Pollutant Discharge Elimination System (KPDES) permit for the above-referenced facility. This action constitutes a final permit issuance under 401 KAR 5:075, pursuant to KRS 224.16-050.

This permit will become effective on the date indicated in the attached permit provided that no request for adjudication is granted. All provisions of the permit will be effective and enforceable in accordance with 401 KAR 5:075, unless stayed by the Hearing Officer under Sections 11 and 13.

Any demand for a hearing on the permit shall be filed in accordance with the procedures specified in KRS 224.10-420, 224.10-440, 224.10-470 and any regulations promulgated thereto. Any person aggrieved by the issuance of a permit final decision may demand a hearing, pursuant to KRS 224.10-420(2), within thirty (30) days from the date of the issuance of this letter. Two (2) copies of request for hearing should be submitted in writing to the Environmental and Public Protection Cabinet, Office of Administrative Hearings, 35-36 Fountain Place, Frankfort, Kentucky 40601 and the Commonwealth of Kentucky, Environmental and Public Protection Cabinet, Division of Water, 14 Reilly Road, Frankfort, Kentucky 40601. For your record keeping purposes, it is recommended that these requests be sent by certified mail. The written request must conform to the appropriate statutes referenced above.

If you have any questions regarding the KPDES decision, please contact Vickie L. Prather, Inventory and Data Management Section, KPDES Branch, at (502) 564-2225, extension 470.

Further information on procedures and legal matters pertaining to the hearing request may be obtained by contacting the Office of Administrative Hearings at (502) 564-7312.

Sincerely,

David W. Morgan, Director
Division of Water

DWM:NG:ng
Enclosure
c: Paducah Regional Office
Division of Water Files